



# Asystole - PEA

## Adult Medical

**Austin County**  
EMS Protocol & Guideline

Version:	<b>1.0</b>
Date:	<b>04/2019</b>

Medical Director: Benjamin Oei, M.D.

**Overview:** Asystole is the cardiac arrhythmia that responds best to good-effective CPR. The viable patient benefits most with early identification and treatment of the underlying cause. In the non-viable patient, Asystole supports utilization of Field Termination

**Definition:** Asystole is a state of no cardiac electrical activity in the myocardium for a sustained duration.

**Look for the cause of the rhythm and focus on reversing the cause of the PEA. Consider: H's & T's**

### EMT

- Place patient on the **Cardiac Monitor**
- Obtain **12 Lead EKG** – if applicable
- **CPR & AED** as appropriate to patients presentation
  - If witnessed arrest shock if indicated
  - Unwitnessed 2 minutes of uninterrupted CPR prior to AED analysis
- **Oxygen** administration as appropriate to the patient presentation
- **Airway Adjuncts** (Supraglottic Airway OPA, NPA), EtCO2 monitoring appropriate to patient presentation
- Obtain **BGL**
- **Identify** Source/Causes

### AEMT

- **IV / IO** – Normal Saline
- **Airway** – ETT with EtCO2 monitoring
- **Vent** – if applicable
- **Epinephrine** 1mg of 1:10;000 IV/IO every 3-5 mins for duration of arrest or until ROSC is achieved - Double the dose if given ETT

### Paramedic

- **Sodium Bicarbonate** 1 mEq/kg for downtimes greater than 10 minutes.
- **Calcium Chloride** 500 – 1000mg IV/IO repeated x1 in 10 min if known renal PT or if hyperkalemia is suspected.

**Consider pacing patient if anticipated to be effective based on patient presentation. See: External Pacing Procedure**

#### PEARLS

- **Amiodarone**, when administered with Vaughan Williams Class I antiarrhythmic (i.e. **Lidocaine**) has been shown to precipitate torsades-de-pointes, and/or post-arrest hypotension. However, if the patient remains refractory to **Amiodarone**, **Lidocaine** should be administered.
- **Magnesium Sulfate** is the first-line antiarrhythmic medication for suspected torsades-de-pointes.
- If unable to determine if rhythm is **Ventricular Fibrillation** or **Asystole** – treat as **Asystole**.
- Initial airway management should be performed by the insertion of a King Tube during the initial stages of cardiac arrest resuscitation. EtCO2 detection, bilateral breath sounds, and adequate chest rise are confirmation of proper placement. Once ROSC has been achieved the King Tube can be replaced with an ET tube unless contraindicated or difficult airway is anticipated.
- Anti-arrhythmic, vasopressors and when appropriate metabolic drug dosing may overlap in administering between shocks. Ensure the IV/IO line is flushed completely to ensure mixing of medications does not happen in the IV tubing.
- In cases where resuscitation is prolonged, prior to transporting to the ER, an ET tube can replace the King Tube unless contraindicated or difficult airway is anticipated.
- Treatable causes may include the 6 H's and 6 T's
  - Hypovolemia, hypoxia, hydrogen ion (acidosis), hypo-/hyper-electrolytes, hypo-/hyper-glycemia, hypo-/hyper-thermia
  - Tablets (overdose), trauma, tamponade (cardiac), tension pneumothorax, thrombosis (heart), thrombosis (lungs).